



1905.

QUEENSLAND.

REPORT OF THE COMMISSIONER OF PUBLIC HEALTH.

Presented to both Houses of Parliament by Command.

TO THE UNDER SECRETARY, HOME DEPARTMENT.

Department of Public Health,

Brisbane, 23rd August, 1905.

SIR,—I have the honour to submit the annual statement of the work done through my Department for the year ending 30th June, 1905.

LEGISLATION.

"*The Dairy Produce Act of 1904*," providing for the better control of dairies and for the regulation of the milk supply, relieved the Department of the inspectors appointed under Part III. of "*The Health Act Amendment Act of 1886*." There is no provision in "*The Health Act of 1900*" for the registration, cleansing, drainage, or water supply of the dairy, a local authority under that Act being empowered, under general provisions relating to cleansing and disinfection of premises and to notification of infectious diseases only, to take such action in connection with dairies as it deems necessary. It is therefore a matter of congratulation to the State that the Dairy Produce Act has been added to the statute-book.

Experience has shown that Part VIII. of "*The Health Act of 1900*," providing for "Infant Life Protection," is totally inadequate to deal with many cases of neglect by persons receiving, for hire, infants for nursing, and to ensure the proper feeding, protection, and care of infants. These matters, I understand, will be the subject of special legislation during the present session of Parliament.

The provisions of the Health Act relating to the sale of bread also require amendment. This is especially the case with respect to the storage and delivery of bread. Bread is in many instances retailed from premises or shops of very doubtful surroundings, the bread often being exhibited for sale in shop windows and at shop doors, along with decaying vegetables and fruit, and exposed to the germ-laden dust of the streets. A short Act, regulating the sale and delivery of bread in the city of Brisbane, and such other places as may from time to time be proclaimed by the Governor in Council, would be welcomed by the public in general, and the Master Bakers' Association of Queensland in particular.

I would again beg to draw attention to the definition of the term "Sewer." Under the existing definition "water channels constructed of stone, brick, or concrete, the property of a local authority," are "sewers" within the meaning of the Health Act. In cases where a local authority has constructed water-tables intended only for the conveyance of surface or storm waters, the inclusion of such water-tables within the definition of "sewer" has given rise to a serious nuisance, as well as to much difficulty and litigation to the local authorities throughout the State. Section 41 of the Health Act also requires amendment. It provides that a local authority may enforce drainage of undrained houses, whether or not a system of sewers has been provided by the local authority for the reception of such house sewage. Where any house in the area is without a drain, and where no sewer within 300 feet from the curtilage of such house has been provided by the local authority, the latter may require the owner or occupier of such house to empty the house drainage into a "covered place" within the abovementioned distance.

A "covered place" is not, unfortunately, defined by the Act, and I would point out that the corresponding section of the Public Health Act of 1875 of England and Wales, upon which the Health Act of Queensland is largely based, the words "covered cesspool" are used. This cesspool under the English Act is made at the cost of, and under the control of, the local authority, which is bound to so construct, ventilate, repair, and keep it as not to be a nuisance or injurious to health. In fact, the "cesspool" is provided by the local authority in lieu of a sewer, and the local governing body is bound to keep such "covered places" properly cleansed and emptied. The difficulty here is that the "covered place" provided for in the Queensland Act is too frequently a hole or trench dug in ground of a non-absorbent nature and covered over with earth. The storage of foul waste waters carrying much objectionable matters in these "pits" tend to a serious nuisance, and are a continual source of danger to the health of the household. The occupier of the premises is not only compelled to empty into, but is also called upon by the local authority to construct such "covered place." The occupier of an undrained house (the local authority providing no facilities for emptying into any existing sewer, including even a formed water channel) is thus forced by the local authority to commit a serious nuisance upon his own premises, and at the present time many of the local authorities are taking advantage of the power so conferred. This provision of the Health Act was intended, apparently, for isolated cases only—*i.e.*, for country districts where the local authority had provided no scheme of drainage.

In March, April, and May of this year, regulations for the better prevention of the spread of plague by rats were made by me and approved of by the Governor in Council. These regulations now extend to the following areas, *viz.*:—The cities of Brisbane, Ipswich, South Brisbane, Maryborough, and Gympie; the towns of Ithaca, Windsor, Hamilton, Sandgate, Toowong, and Bundaberg; the shires of Enoggera, Kedron, Indooroopilly, Sherwood, Toombul, Yeerongpilly, Balmoral, Belmont, Coorparoo, Stephens, Taringa, Wynnum, Isis, Widgee, Tiara, Granville, Tinana, Antigua, Burrum, Degilbo, Howard, Barolin, and Woongarra. The Local Authorities Association has, as you are aware, taken counsel's opinion as to the legality of the duties imposed, and, up to the present time, many of the local authorities are enforcing the regulations with less vigour than is desirable.

In the recent annual report of the Medical Officer of Health for Sydney, Dr. Armstrong says:—"The Sydney experience of plague during four years may be stated to have crystallised into the axiom, 'where there are no rats there will be no plague in man,' and experience in Brisbane supports the truth of this statement.

One or two men experienced in rat-catching are employed by the Department at several of the Northern ports, where plague has occurred in man or in rats.

Three cases of plague have been recently reported at Cairns, two of the patients being men employed in rat-catching. Some alarm has occurred in consequence, and at the present time it is difficult to secure local men for the purpose of destroying rats.

A case of plague at Townsville was reported on the 4th instant, and some sixty-three plague-infected rats were found on the wharves there.

In view of the abovementioned reports, the possibility of the carriage of plague-infected rodents from Townsville and Cairns to Brisbane is regarded with grave concern, and it has been necessary to maintain a constant watch on all vessels arriving at the port of Brisbane which have berthed at Townsville or at Cairns. The Health Officer at Brisbane boards all vessels arriving from the infected ports, and no cargo is permitted to be discharged from such vessels except under the personal supervision of an officer of this Department. The adoption of this course is inevitable if further restrictions against importations from Queensland ports are not to be imposed by the Health Departments of the southern States.

A gang of five men, under the personal supervision of an inspector of the Department, is now employed in rat-destruction at Townsville.

Under "*The Health Act of 1900*," a local authority is bound to abate nuisances injurious to the health of the inhabitants of its area, to prevent the pollution of its water supply, and generally to carry out the provisions of the statute to the best of its ability, and as far as funds will allow. In the abatement of such nuisances, or for the purpose of constructing works, it is necessary for the local authority to proceed in the manner prescribed.

Under the Health Act a local authority has no power to raise a loan from the Government for the abovementioned purposes, and the Commissioner of Public Health can only obtain such loan from the Treasurer when it can be shown that the local authority has made default. In neither case can a loan from the Government be obtained if the local authority has not repaid its past indebtedness to the Treasurer, notwithstanding the necessity or expediency of the proposed work. The dilatory and circumlocutory procedure necessary under "*The Local Authorities Act of 1902*" with regard to the raising of the necessary funds by a local authority defeat the very aim and spirit of "*The Health Act of 1900*." The nuisance caused by the pollution by sewage of the Kingfisher Creek, in the South Brisbane area, is a case in point. The Commissioner may, with the Minister's approval, order the abatement of a nuisance injurious to the public health, yet the local authority can seriously delay or even defeat such order, if a special loan rate is required to be struck for the purpose of providing the money required for the abatement of such nuisance, or for the construction and maintenance of such works as may be necessary.



ADMINISTRATION.

Experience has shown that it is still expedient to reserve considerable powers, both of superintendence and control, to the State Department of Public Health. "*The Health Act of 1900*" throws upon each local authority the responsibility of safeguarding the public health of its own area. The principle is a sound one. The danger of multiplying authorities for the purpose of sanitary administration and the evils of divided responsibility and joint administration have been fully exemplified in the past. The growing interest taken by local authorities and the community in matters connected with the public health has led to increased demand for improved sanitary laws to meet practical requirements. Hence, if sanitary legislation is to be progressive it must, necessarily, be of a piecemeal character.

Two classes of the community are, and probably always will be, unfriendly to the work of the Health Department—"One is composed of those who have, contrary to their inclinations, been required to do things which knowledge and experience have shown to be necessary for the prevention of sickness and death; the other, a much larger class, is composed of those who are ignorant of the work done by the Department, and, seemingly, do not care to learn anything concerning it." While it is the legitimate duty of the Department to advise and stimulate the local authorities, or, where necessary, to compel the remedying of sanitary evils produced by local inefficiency or apathy, it is imperative that sanitary legislation be compulsory, and not permissive.

I desire to express my appreciation of the pleasant and friendly relations which at present exist between the Department of Public Health and the local authorities throughout the State. To have earned the appreciation of the local governing bodies is good, to have earned their active and willing co-operation in the administration and execution of a somewhat stringent Act of Parliament is better still.

The present danger, however, is not so much the apathy as the multiplicity of local authorities, especially in the "Metropolitan Area." The vigour belonging to unity of administration may, perhaps, be best combined with the constitutional advantages of local self-government by the amalgamation—the greater Brisbane scheme—of the numerous independent governing bodies concentrated around the capital of the State. The reluctance of business and professional men—whose experience and knowledge of commercial affairs would insure a more judicious, economic, and efficient administration in local government—to assume their share of public duties, and to accept their portion of the annoyances and responsibilities of office, is greatly to be regretted.

Efficiency, with due regard to economy, has been kept steadily in view in the administration of the Department. The aim of the Department has been to economise expenditure, consistent with judicious management; but while economy with a well-directed expenditure is necessary in all or any branch of the public service, there is, however, such a thing as false economy, where the safety, the health, and even the lives of the people are at stake. *Magnum est vectigal parsimonia.*

The members of the Central Board of Health have, as in former years, given me much assistance and guidance in the administration of the Health Act, and more especially in those matters pertaining to interstate affairs.

A conference with Dr. Ashburton Thompson, Chief Health Officer for New South Wales, was held at Brisbane in June last, with reference to the plague regulations imposed by the New South Wales Government, and which, for a time, so seriously affected Queensland shipping and commerce. I am pleased to relate that, after a full statement of the facts, concerning the measures taken by this Department to prevent the spread of plague infection, had been placed by myself and the members of my board before the Chief Health Officer of New South Wales, that gentleman recommended to his Government the withdrawal of many, and the amendment of several, of the more restrictive measures which had been enforced against importations to New South Wales from Queensland.

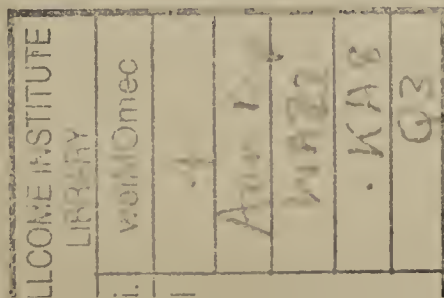
The proposed federal legislation on quarantine should secure that uniformity of action and certainty of procedure in the administration of the plague regulations of the various States which, up to the present, have been notoriously absent.

The loss to the Department of Dr. Baxter-Tyrie, who is resigning his position as Health Officer to take up private practice, will be keenly felt. His ability, energy, and tact in the many trying positions in which he has been placed have won him the esteem and regard of every officer of the Department.

INFECTIOUS DISEASES.

By comparison with tables in preceding annual reports, it will be seen that during the past year the notified attacks of typhoid fever, scarlet fever, diphtheria, and deaths from phthisis are remarkably low.

A voluntary co-operation, and a more general recognition of the protection of the public health which is afforded by prompt official notification and isolation of the affected person, together with the cleansing and disinfection of infected premises, and the remedying of sanitary defects, have no doubt contributed in a large measure to the result obtained. Compulsory notification of infectious diseases is merely a means to an end, that end being prevention. Statistical records, the compilation of figures—the arithmetic of disease—are only of service when they can be utilised for the purposes of suppression



and prevention of diseases. While epidemics of notifiable diseases have been comparatively few throughout the State during the past year, it is interesting to note the extraordinary waves of other and more rare diseases which have passed over the State during the past twelve months.

In the months of July and August of 1904, a short but sharp epidemic of *Influenza* occurred at Brisbane and other cities and towns in the State. Following this visitation of disease, a widespread outbreak of *Mumps* attacked a very large proportion of the population, adults as well as children. This epidemic of a somewhat "old-fashioned" malady had hardly subsided before a new and rare disease, to wit, *Infantile Paralysis*, was reported. Details of some 108 cases were gathered, excluding twenty-three cases reported by members of the medical profession as *Cerebro-spinal Meningitis*. The outbreak formed the subject of a special report, and the matter was fully discussed in a paper I had the honour to read before the Queensland branch of the British Medical Association. A table, showing the incidence, mortality, and case fatality in respect of sex and age periods, will be found in Appendix F hereto.

To complete the abovementioned cycle, an epidemic of *Dengue Fever* prevailed in Queensland from February to June of this year. No other epidemic of which we have had experience in Queensland attacked so large a proportion of the population of the State. As the disease was not a notifiable one under the Health Act, it is impossible to arrive at the precise statistics of the outbreak. It is probably not an exaggeration to estimate that not less than three-fourths of the population of Brisbane were attacked, while epidemics, more or less severe, were reported at all the large centres of population. The direct mortality from dengue fever was very low. A special report on the outbreak has been prepared by me, and presented by command to both Houses of Parliament.

The incidence of other diseases—notably plague, typhoid fever, and scarlet fever—in Brisbane during the months of the dengue fever epidemic, showed a remarkable difference from their behaviour in previous years. A marked drop in the number of plague cases for the months of March-June of this year was observed, while but sixty-eight cases of typhoid fever were notified, as against 186 of last year.

Plague appeared again during the financial year, the first case being notified in Brisbane on 12th August, 1904. Thirty-four cases occurred in Brisbane, seven at Ipswich, one at Childers, one at Cairns, and ten at Maryborough; a total of fifty-three cases from 1st July, 1904, to 30th June, 1905. Nearly four months elapsed between the last case of 1904 and the first case of 1905, which was reported on New Year's Day. Of the fifty-three cases, twenty-eight died, which gives a gross death rate of 52·8 per cent. Deducting one fatal case of a Chinaman, the figures give a corrected death rate for white races of 50·9 per cent. Deducting fatal cases which were not treated for plague—*i.e.*, cases diagnosed, *post mortem*, and a few who died after diagnosis, but before they could be treated—the figures give a death rate for treated cases of 33·9 per cent.

It is gratifying to read in *The Australasian Medical Gazette* for August, 1905, that "the prompt and energetic action of the Public Health Department has in each case prevented any considerable spread of the disease. In Maryborough, especially, where the dreaded pneumonic type proved so virulent, their prompt and decisive action cannot be too highly lauded."

Official inquiries as to the origin of the outbreaks, both at Ipswich and Maryborough, were held by me, and formed the subject of special reports to the Honourable the Home Secretary.

The number of men employed on the cleansing and rat-destruction staff maintained by the Department varied from time to time, and was reduced in March last from fifty to twenty men, and in June to ten men. This staff has done a considerable amount of excellent work, and the improvements effected in premises used for the storage of grain, fodder, and other produce specially liable to rat infestation, together with the number of breeding places of rats broken up and rodents destroyed, have gone far to reduce the disease-carrying vermin to a minimum.

Until legislation be passed empowering local authorities to prosecute occupiers or owners of premises for allowing conditions favourable to infestation by rats to occur and continue upon their premises, it is imperative that the departmental staff should systematically search such premises, and clear them of vermin, in the interest of the community.

The rat-catching staff of the department has from time to time visited places in the State where cases of plague among humans, or mortality among rats, have occurred. Some 306 lb. of rat poison were manufactured and distributed gratuitously to the local authorities and householders throughout the State.

Scarlet fever was strikingly less prevalent than in 1904, and there were no localised outbreaks. Only sixty-nine cases are recorded for the State, as against 986 cases for the corresponding period of last year.

The incidence of typhoid fever still remains high in the areas of Brisbane, South Brisbane, Ithaca, Toowong, and Windsor, though only 220 cases were reported in the Metropolitan Area as against 381 of last year. Five hundred and eighty-eight cases were recorded for the State in 1905, as compared with 777 of 1904.

Three hundred and eighty-six vessels were furnished with "Berthing Certificates," and eighty-six vessels were fumigated at the Port of Brisbane, in conformity with the Plague Regulations, and to meet the requirements of the health departments of the southern States. These regulations and requirements were also duly observed at the Northern ports.

Phthisis is now a notifiable disease (apart from notification of deaths from that disease), and is recorded for the first time. One hundred and sixty-two cases were reported.

The "reasonable arrangement" with the local authorities and the governing body of the Brisbane General Hospital for the reception and treatment of infectious diseases at Wattlebrae Hospital, as provided by section 117 of the Health Act, still remains in abeyance. All the local authorities of the Metropolitan Area, with the single exception of Brisbane, have signified their approval, and are prepared to enter into an agreement with the management of the General Hospital in accordance with the arrangement referred to.

The provision of hospital accommodation for cases of infectious diseases is to be regarded primarily as a measure of sanitary defence, for the protection of the public rather than for the benefit of individuals, and hence the question of efficiency, apart from the question of economy, must be considered in determining what class of patients should be isolated at Wattlebrae Hospital.

NOTIFICATION.

The following cases of infectious diseases throughout the State were reported to the Department:—

Cases.	1st July to 31st December, 1904.	1st January to 30th June, 1905.	Totals.
Bubonic Plague	6	47	53
Diphtheria	93	88	181
Phthisis	91	71	162
Membranous Croup	1	...	1
Erysipelas	27	22	49
Scarlet Fever	57	12	69
Typhoid Fever	233	355	588
Relapsing Fever ... ..	...	...	...
Puerperal Fever	3	4	7
Continued Fever	1	...	1
Deaths from Phthisis	66	32	98
Grand total ... ..	...	...	1,209

Distribution of cases within the Metropolitan Area for the twelve months ending 30th June, 1905:—

Local Authority.	Typhoid Fever.	Scarlet Fever.	Puerperal Fever.	Diphtheria.	Erysipelas.	Phthisis.	Total.
Brisbane	73	5	1	53	8	50	190
South Brisbane	64	3	4	26	13	26	136
Ithaca	23	...	...	14	3	15	55
Toowong	19	1	...	4	...	2	26
Wynnum	2	2	1	1	...	...	6
Sandgate ... ..	...	...	1	1	...	...	2
Balmoral	8	2	1	4	...	...	15
Hamilton	4	...	1	3	1	8	17
Coorparoo ... ..	...	...	...	1	1	1	3
Indooroopilly	1	...	...	1	...	1	3
Enoggera ... ..	...	1	...	1	1	...	3
Kedron	1	2	...	1	1	3	8
Stephens	3	1	1	8	2	2	17
Windsor	15	1	...	12	1	4	33
Toombul	3	...	...	2	2	13	20
Yeerongpilly	1	...	...	...	...	...	1
Sherwood	1	...	...	...	...	2	3
Belmont ... ..	...	...	...	1	...	1	2
Taringa	2	...	...	2	1	5	10
Total	220	18	10	135	34	133	550

PHTHISIS.

A most important advance during the year 1904 was the adoption by the Governor in Council of the recommendation for the compulsory notification of pulmonary consumption. The scheme for the prevention of human tuberculosis instituted by the Department (in which cases are notified compulsorily, but without publicity, and with the ready co-operation of the medical profession) has worked well, and without the slightest friction. The dissemination of information among households of consumptive persons as to the best means of dealing with sputa, and otherwise taking precautions against the spread of the disease, and the information the Department has been able to acquire as to the location and movements of consumptive patients by the visits of Nurse Perry, must contribute not a little towards the prevention of this terrible scourge. Other States of the Commonwealth are following the good example.

Rules for the prevention of tuberculosis were issued by me in circular form in October of last year.

The reports of Dr. Baxter-Tyrie, Health Officer to the Department, of Staff Nurse Perry, and of Inspector Daniel, the Disinfecting Officer, are well worthy of perusal, and I have the honour to append them in extenso (Appendices C, D, and E).

The transmission of tuberculosis by cows' milk is a source of infection of great importance, and Dr. Baxter-Tyrie has ably dealt with the question in his report.

Staff Nurse Perry states that the patients visited by her, with the consent and approval of their medical attendants, have been mainly of the working class, who have, in the majority of cases, made every effort to carry out the advice tendered personally or in the circular leaflets issued by the Department. "Nothing," Nurse Perry states, "was more noticeable than the immediate improvement in the surroundings of the patient after a visit or two had been paid."

Of sixty-nine dwellings visited by Inspector Daniel, fifty-two were disinfected under his supervision or instructions. Boarding-houses and lodgings of kanakas have received especial attention.

LEPROSY.

Many leading medical authorities are still strongly of the opinion that leprosy is a communicable disease, but there is a want of certainty as to the conditions under which it is communicated. As in consumption, besides the *contagium vivum*, a special individual disposition is necessary for the acquisition of the disease, and it can only become endemic in areas where, besides the presence of the virus, those factors exist which are responsible for the special disposition of the individual. Taking into consideration the results obtained in other countries, segregation is advisable in the interests of the public and for humanitarian reasons, also in the interests of the unfortunate sufferers themselves. A large amount of scientific investigation has of late years been carried out in Europe, the United States of America, and other countries. In the May number of the *Indian Medical Gazette*, a paper by Captain Rost, Indian Medical Service, appeared, in which he claims to have grown the leprosy bacillus and to have successfully treated the disease by inoculation with "Leprolin," and more recently literature has been published announcing that twenty-nine cases of leprosy have been cured by this method. With a view of determining the curative properties claimed for the abovementioned preparation, three bottles (each equal to one dose) were received by the Department in May last through the good offices of Dr. Culpin, M.H.R., from Dr. Rost, of Rangoon. A leper at the Lazaret at Stradbroke Island was injected with one dose at intervals of a fortnight. There was no reaction of pulse or temperature, and no external evidence of change in the tubercles. The man, however, considers himself very much better, and is certainly now much more active in his habits than previously. Both he and other patients are urgent in their demands that further supplies of Leprolin be procured for their treatment.

It was ascertained that practically the whole supply of Leprolin had been taken up by the Indian Government. It was found, however, that with a little additional apparatus the serum could be prepared by the Department of Public Health at a small cost. The Minister having approved of the recommendation in the matter, the material is now being manufactured at the Bacteriological Institute under the direction of Mr. Pound. The result of the inoculation tests will be reported in due course.

Nineteen cases of leprosy have been segregated, as compared with twelve of last year.

TABULAR STATEMENT OF CASES OF LEPROSY RECORDED IN THE STATE OF QUEENSLAND FROM 1ST JULY, 1904, TO 30TH JUNE, 1905.

Initials.	Sex.	Age.	Race or Nationality.	Occupation.	Form or Type.	Previous Duration of Illness.	Assigned Place of Residence.	Date of Segregation.	Died.	Remaining.
1. B.W. ...	M.	...	Kanaka ...	Labourer ...	Tubercular	3 years ...	Mount Cotton, near Brisbane	22-7-04	...	Yes
2. A.D. ...	F.	34	Australian (Q.)	Housewife ...	Nerve ...	Early stage	Taringa, near Brisbane	14-10-04	16-7-05	...
3. D.B. ...	M.	29	do ...	Shearer ...	Tubercular	2½ years ...	Roma ...	7-11-04	...	Yes
4. H.B. ...	M.	64	English ...	Farmer ...	do ...	6 months...	Townsville ...	4-10-04	...	do
5. D.P. ...	M.	...	Kanaka ...	...	Nerve ...	...	Mulgrave ...	22-9-04	...	do
6. Y. ...	M.	32	do ...	Plantation labourer	Tubercular	...	Geraldton ...	26-10-04	...	do
7. M. ...	M.	...	do ...	do ...	do ...	...	Nelson ...	...	26-5-05	...
8. W. ...	M.	...	do ...	do ...	do ...	...	Buderim Mountain	26-10-04	...	Yes
9. N. ...	M.	...	do ...	do ...	do ...	...	Mulgrave ...	26-10-04	...	do
10. T.C. ...	M.	...	do ...	...	do ...	...	Goodwood, near Bundaberg	26-10-04	...	do
11. W.G.G.	M.	50	do ...	Agricultural labourer	Nerve ...	...	Buderim Mountain	26-10-04	11-11-04	...
12. O.Y.N.	F.	35	do ...	Labourer ...	Tubercular	Some years	Childers ...	26-10-04	...	Yes
13. T.M. ...	M.	24	Aboriginal ...	do ...	do ...	...	Myora, near Dunwich	26-10-04	...	do
14. P. ...	M.	50	Kanaka ...	do ...	do ...	3 years ...	Ayr ...	17-6-04	...	do
15. M. ...	M.	...	do ...	do ...	do ...	...	Bundaberg	21-12-04	...	...
16. Q. ...	M.	40	do ...	do ...	do ...	...	Geraldton ...	17-2-05	...	do
17. J.L. ...	M.	32	do ...	Farm labourer	do ...	Some years	Geraldton ...	17-2-05	...	do
18. C. ...	M.	25	Aboriginal ...	Black tracker	do ...	...	Tate River ...	1-2-05	...	do
19. A.H. ...	F.	78	Irish ...	Boarding-house keeper	do ...	...	Gayndah ...	13-5-05	...	...

PLAGUE.

The total number of cases from 1st July, 1904, to 30th June, 1905, was fifty-three, of which twenty-eight terminated fatally, a gross mortality of 52·8 per cent., distributed as follows:—

—						Cases.	Bubonic.	Septicæmic.	Pneumonic.	Deaths.
Brisbane	...	...	...	...	...	34	30	4	...	18
Ipswich	...	...	...	...	...	7	7	...	...	1
Childers	...	...	...	...	...	1	...	1	...	1
Maryborough	...	...	...	...	...	10	1	6	3	8
Cairns	...	...	...	...	...	1	1	...	...	...
Total	...	...	...	...	...	53	39	11	3	28

As in former years, the epidemic was markedly periodic. This characteristic of the disease has been noted in many other countries where plague has occurred. In Brisbane, each epidemic lasts a period of from five to six months—from about the end of January to beginning of July—after which the disease disappears both in man and in rodents, to return after an interval of five to six months. This is repeated year after year.

The last case of plague in human beings in Brisbane in 1904 was reported on 14th September. The last infected rat was found on 15th December, 1904.

The first case in man in 1905 was discovered on New Year's Day; the first rat found plague-infected, on 4th January.

The incidence of plague in the Metropolitan Area in man and rodents for each month in the years 1904 and 1905 was:—

—										Man.		Rats.	
										1904.	1905.	1904.	1905.
January	...	...	...	...	...	...	...	...	...	...	4	21	5
February	...	...	...	...	...	...	...	...	7	16	...	3	59
March	...	...	...	...	...	...	...	...	...	2	...	25	48
April	...	...	...	...	...	...	...	...	7	1	...	25	3
May	...	...	...	...	...	...	...	...	12	2	...	89	7
June	...	...	...	...	...	...	...	...	3	3	...	150	5
Total	...	...	...	...	...	...	...	...	29	28	...	313	127

The total number of rats and mice destroyed within the Metropolitan Area for the years 1904 and 1905, ended 30th June, is as follows:—

Year.						Number Destroyed.	Number Examined.	Number of Rats Infected.	Percentage of Infected Rats.
1904	...	...	...	...	...	46,056	21,785	317	1·45
1905	...	...	...	...	...	34,889	19,880	194	0·98

A large proportion of all rats and mice caught were forwarded to the Bacteriological Institute for examination.

The monthly returns are as follow:—

1904.				Rats.	Mice.	Found Plague-infected.	1905.				Rats.	Mice.	Found Plague-infected.
July	...	...	...	1,125	336	38	January	...	...	...	1,242	330	5
August	...	...	...	879	283	17	February	...	...	...	1,669	518	59
September	...	...	...	1,367	189	4	March	...	...	...	1,703	514	48
October	...	...	...	1,837	320	...	April	...	...	...	1,248	313	3
November	...	...	...	1,203	253	6	May	...	...	...	1,424	342	7
December	...	...	...	1,684	303	2	June	...	...	...	549	249	5
				8,095	1,684	67					7,835	2,266	127

The following premises within the Metropolitan Area were specially examined for rats, but the results do not include the ordinary work carried out by the departmental cleansing and rat-destruction gang at the same premises :—

Premises.	Number Examined.	Number of Rats Caught.	Number of Mice Caught.	Number of Rodents found Plague-infected.
Produce Stores	29	1,514	426	28
Slaughter-yards	10	2,674	85	10
Butchers' Shops	17	461	140	Pigmented glands
Stables	39	1,049	202	8
Grocers' Shops	38	1,189	169	27
Hotels	18	133	9	28
Dairies	5	498	12	Pigmented glands

By the examination of large numbers of rats from areas regarded as “dangerous,” timely warning of the occurrence of plague infection was obtained, and when plague-infected rodents were found upon any premises the latter were systematically searched and cleared of their vermin.

The procedure adopted with regard to the examination of persons reported by medical practitioners to be suffering from plague did not differ from that of former years. All cases accepted as “positive” satisfied both clinical and bacteriological investigation, as well as inoculation experiments in the laboratory. A large number of suspicious cases of illness reported were “negatived” after careful examination. In all doubtful cases the patient was treated for plague, pending a decision, a nurse attending until the diagnosis was made. Consequent on the results obtained by Dr. Hunter, of Hong Kong, the blood of a large number of cases was examined in the early stages of the disease for the *B. pestis*. In eight cases in which *B. pestis* were found in the blood of persons suffering from plague, four terminated fatally. It has been generally believed that *B. pestis* is found only in the blood shortly before death, but Hunter’s results go to show that it is commonly found quite early, and, in most cases, including those of a mild type. What becomes of the causative bacillus during the quiescent period—the interval between one epidemic and another, or between an epizootic and an epidemic—is a problem still to be solved.

It has been our experience that rats may suffer from plague and recover from the toxic effects of the *B. pestis*. The investigation carried on during the past two years at the Bacteriological Institute in this direction affords ample demonstration of the above fact. The opportunities for observation in this connection have been many, and the whole matter forms the subject of a special report, now in course of preparation. There is also much evidence to show that the route of invasion of the plague bacillus is mainly through the alimentary channel, but our results still need further investigation and consideration.

Bacteriological, cultural, feeding, and inoculation experiments conducted with such suspected material as grain, fodder, produce, articles of commerce, and the like, gave negative results as to the independent or prolonged existence of the *B. pestis* outside any living body.

With regard to the efficacy of Yersin’s serum, though it is difficult to estimate the value of a remedy that has been employed in nearly all cases treated by the medical officers of the Department, which are therefore not comparable with a series of cases not so treated, the experience of some six epidemics of plague in Queensland leads me to the opinion that it is a potent remedy when given early and in large doses.

The rôle played by the Norway rat, *Mus decumanus*, in spreading plague, and its historical, geographical, shipboard, and landward distribution, have lately been discussed by various observers in other countries where plague has existed. It has been contended by Skinner that the Norway rat is immune, and by ousting or destroying the very susceptible long-tailed species—*Mus rattus*—whose indigenous area corresponds with the endemic areas of plague, has helped to save Europe from the spread of epidemics.

The return of species of *plague-infected* rats caught in Brisbane for the past eighteen months is as follows :—

<i>Mus decumanus</i>	394
<i>Mus rattus</i>	71
<i>Mus alexandrinus</i>	35

It would appear, therefore, that *Mus decumanus* is not only found in large numbers in endemic plague areas, but is susceptible to plague infection, apart from laboratory experiments.

On 4th May, a case of plague was discovered at Ipswich. Within a week six other cases occurred. Six of the seven patients were removed to the Colmslie (Brisbane) Plague Hospital, and all of them recovered. The remaining case, a boy, aged eight years, being too ill for removal at the time, was attended at his own home at Ipswich, and died there on the 9th May. All the cases were bubonic in type, and were traced directly to a produce store, a dilapidated shed in which rats had been reported to be dying in large numbers a week before the outbreak. The store was demolished, much of the contents

burned, and the rest disinfected. A large number of rats was destroyed in the Ipswich Area, and every precaution promptly and energetically carried out. As a result, the outbreak was limited to these seven cases, and no further development has taken place.

On the 16th May, a man died of septicæmic plague at Childers. Large numbers of rats were found dead in the town, and the epizootic was severe. Circumstances seemed to indicate that infection was conveyed by fodder from Bundaberg. As a precautionary measure, the whole town was inspected, produce stores, &c., put in order, insanitary conditions remedied, and a special staff of men employed in rat-destruction. Similar precautions were carried out at Bundaberg, and no further cases occurred at Childers.

On the 14th June an official inquiry was held by me at the Municipal Chambers, Maryborough, into the circumstances of an outbreak of plague in that city. The outbreak was characterised by pneumonic manifestations, without distinct enlargement of the lymphatic glands, a type of plague which, fortunately, has been rare in Queensland. The members of one family (O'C.), consisting of seven children, residing with their father at Newtown, Maryborough, in a state of great poverty and neglect, were seized within a few days of each other with acute gastro-intestinal symptoms, which terminated in five of the cases with symptoms of pneumonia. The first case, a boy of seventeen years, died on 25th May, and prior to his death he was attended at his own home by a local medical practitioner, who diagnosed the case as one of "pneumonia." On the 28th May, a neighbour of the above family (O'C.), a Mrs. E., who had visited and assisted in nursing the above case, sickened with headache, vomiting, &c., and died at her home on the 31st May. In this instance a certificate of death was refused by the local medical practitioner, and a *post mortem* examination was ordered by me. The body, however, was buried without a death or other certificate by the Maryborough Cemetery authorities. Four other children of the O'C. family, who had sickened with symptoms similar to the first case, were sent into the General Hospital by a medical practitioner on 28th May. On the 31st May, a girl (E. O'C.), aged seven years, and a boy (Jas. O'C.), fifteen years, died at the General Hospital with symptoms of "broncho-pneumonia," and the medical superintendent signed the death certificates to that effect. On the 2nd June another member of the O'C. family, a boy (R. O'C.), aged ten years, and on the 3rd June, a girl (M. O'C.), aged three and a-half years, died at the hospital, both with symptoms of plague-pneumonia.

Two staff nurses, of the Maryborough General Hospital, who had attended the above patients from their admission to the wards, were taken ill with symptoms of pneumonia, and died on 6th and 12th June respectively. A third nurse, who had sickened, and was treated by the Health Officer of this Department, recovered.

The above is a short history of the association and distribution of the cases. There was a direct connection between all of the cases. Apparently, suspicion was not aroused until the coincident deaths of Mrs. E., at her residence, and the two children in the General Hospital on the one day—viz., 31st May. The nurses and inmates of the General Hospital were thus exposed to infection before the real nature of the disease had been discovered and the Department communicated with. A rapid development took place, five deaths occurring at the hospital within six days. In all, ten cases occurred, of which eight terminated fatally.

It is to be regretted that the precautionary measures taken by this Department, and which were carried out with signal success at a later date, could not have been enforced earlier. The Department was not made aware of the occurrence of several sudden deaths from some suspicious but undetermined cause until after the event.

The measures taken for the suppression of the outbreak were preventive inoculation of doctors and nurses in attendance, together with the wearing of specially designed costumes and respirators; isolation of those sick or exposed to the infection; destruction by burning of the house, with its contents, occupied by the O'C. family; quarantine of the hospital premises; disinfection of clothes; disinfection of premises, including the General Hospital; cleansing operations, and the destruction and examination of rats caught in the town. His Worship the Mayor and the Council of the City of Maryborough afforded me active and willing co-operation. No further development has taken place. A special report on the outbreak has been prepared and presented to the Honourable the Home Secretary, who authorised its publication.

CANCER RESEARCH.

With a view of determining the true and ultimate causative factors in the history of the cancer cell, a Cancer Research Fund, with His Majesty the King as Patron, has been established in England under the control of the Royal College of Physicians, of London, and the Royal College of Surgeons, of England.

The information sought by the Right Honourable the Secretary of State for the Colonies, with regard to cancer and malignant diseases in the State of Queensland, has been collected and collated and forwarded through the proper official channels to the home authorities. Such summary of statistics and other information, notably the alleged absence of cancer among the aboriginal natives and Pacific Islanders in the State, have been included in a Report of the Imperial Fund presented to both British Houses of Parliament by Command of His Majesty.

It is a matter of regret that the Brisbane General Hospital Committee, owing to the lack of a resident pathologist or a professional expert, whose duty it would be to analyse and investigate the value of the hospital records relating to cancer cases, had to confess its present inability to furnish the required information. Mr. Payne, however, stated that as far as possible the information as regards future cases treated at the hospital would be supplied for transmission to the Research Fund.

FOOD.

Some uniform system of control throughout the Commonwealth in regard to the Adulteration of Foods Acts is now generally admitted. No power, however, exists at present for the inauguration of Commonwealth legislation on the subject, apart from clause 37 of the Constitution, which gives the Federal Parliament power to make laws on "matters referred to it by the Parliament or Parliaments of any State or States."

The want of uniformity—nay, indeed, the remarkable discrepancy—between the standards imposed by regulation in the various States is a matter of notoriety, and cannot but have a very hampering effect upon interstate trade and commerce.

Pending Commonwealth legislation on the matter, I am at present endeavouring to bring about uniformity of action by means of some mutual agreement between the heads of the Health Departments of the several States.

It is satisfactory to state that the large bulk of foodstuffs manufactured and retailed in Brisbane and in many other large centres in the State are, on the whole, wholesome and free from adulteration.

The present difficulty is chiefly one of proper labelling in accordance with the provisions of the Act and Regulations. Proper and adequate labelling of foodstuffs would not only afford a permanent guarantee that the nature, substance, and quality of food and other products were in accordance with the demand and expectation of the purchaser, but would go far to protect the health and the interests of the public by directing attention to those products which are genuine and of good quality as against the unfair competition arising from the introduction and sale of imitations and of inferior and adulterated articles. If every retailer refused to stock and sell goods not labelled in accordance with the provisions of the Act, or without an authoritative and permanent guarantee from the manufacturer, there would be little cause for complaint at the present time on the grounds of adulteration. The danger is the flooding of the local markets with "cheap and nasty" foodstuffs manufactured in the southern States. This matter of unfair competition in foods from other parts of the Commonwealth was the subject of much discussion at a conference I arranged early last year with the Brisbane Manufacturers' and Grocers' Associations. Many matters relative to the adulteration and sophistication of foodstuffs, and the need of proper inspection and examination by the officers of the Department of Public Health, apart from the feeble action or total apathy displayed by the majority of local authorities, was greatly emphasised.

With the single exception of the Brisbane Municipal Council, no other local authority throughout the State has appointed an analyst, or carries into execution the provisions of the Health Act relating to Food. The lack of a qualified analyst on the score of expense, and the expense and uncertainty attaching to legal actions, as, *e.g.*, the experience of the Brisbane Municipal Council in connection with the recent adulteration of milk prosecutions, doubtless prevent a Local Authority from taking action independently of the State Department.

If my Department is to assume that control which an experience of five years' administration of this part of the health statute proves to be absolutely necessary, it is imperative that a competent analyst be placed at my disposal. Before legal action can be taken, an analysis of the foodstuffs in question must be made; and it is only by the courtesy of the Government Analyst, Mr. J. B. Henderson, who is not an officer of my Department, and whose time is often fully occupied with matters more directly pertaining to his own Department, that any examination has been made in the past. With regard to the adulteration of milk, it would appear, from a report published by the Government Analyst, that "the watering of milk is looked upon as rather a harmless lapse from the paths of rectitude than a serious offence." The danger of starving children or infants dependent upon a milk diet, through the addition of water to milk, requires to be more strongly brought home to the judicial as well as to the lay mind. In this connection, Mr. Henderson very pertinently says:—"It must be remembered that the milk of a good cow can have about one-third of water added without bringing it below the generally accepted standard, and that, in milk from a herd of cows, if the analyst states that there is added water present, there is almost invariably much more there than the amount to which he certifies. Suppose the cows are not first-class, and the milk is brought to a little below the standard by the addition of one-third water, and suppose the analyst certified to 10 per cent. added water, the milkman actually has 25 per cent. added water in his milk. And if he sells 100 gallons per day at 4d. per quart—the general retail price in Brisbane—he gets £6 13s. 4d.; but, as he has 25 gallons of water in it, he disposes of the water at the same rate—£1 13s. 4d. of the amount, therefore, being for water."

DISINFECTANTS, Etc.

For some time past I have sought to have placed on the local market a reliable disinfectant at a reasonable price for household purposes, and to encourage householders and others to use disinfectants more freely than at present obtains in Brisbane—or, indeed, in Queensland. It has been argued, on the one hand, that if the so-called “disinfectant” does not contain a certain percentage of, say, carbolic acid or its homologues, it is useless for the purpose it is intended for; and if it does contain from 2 to 3 per cent. of carbolic acid or its homologues, or other chemicals which are considered “poisonous,” the names of such substance, and the percentage of the active ingredients, must be legibly written or printed on the label, and the sale of such substance or compound in some respects controlled under the Poisons Act. On the other hand, the indiscriminate sale of disinfectants by unregistered retailers is likely, it is urged, to flood the market with spurious and inferior “disinfectants,” “fluids,” “solutions,” &c. Under section 104 of the Health Act, the percentage of active ingredients contained in any disinfectant, deodoriser, germicide, preservative, antiseptic, sanitary powder, or sanitary fluid, must be legibly written or printed on the label. Most of the preparations manufactured by reputable English and Local firms comply with this section of the Queensland statute, though there are many so-called “germicides” and “preservatives” which claim to come under the category of “patent medicines” or “proprietary articles.”

A collection of the disinfectants, &c., retailed in Brisbane is now being made, and will be analysed as opportunity affords.

The following list has been supplied by the Government Analyst:—

CUSTOMS DEPARTMENT.

- 20-6-01—Carbolic acid (Evans, Lescher, and Webb) contains less than 50 per cent. carbolic acid.
- 21-6-01—Carbolic powder (Taylor and College) less than 15 per cent. carbolic acid.
- 17-6-01—Carbolic acid (Webster's) contains less than 50 per cent. carbolic acid.
- 18-5-01—Carbolic powder (Dreadnaught Brand) contains less than 18 per cent. carbolic acid.
- 24-1-01—Carbolic acid (no marks) contains less than 10 per cent. phenols and cresols.
- 7-1-01—Carbolic powder (Dussek Brothers) contains less than 15 per cent. phenols and cresols.
- 2-1-01—Carbolic acid (Dussek Brothers) contains 45 per cent. phenols and cresols.

HEALTH DEPARTMENT.

- 20-1-05—Disinfecting fluid (no marks) contains 30·5 per cent. phenols.
- 13-1-05—Disinfecting fluid (McDougall Brothers) contains 11·5 per cent. phenols.
- 13-1-05—Disinfecting fluid (“Lion”) contains 16 per cent. phenols.
- 18-1-04—Mycol. contains—
 - 48 per cent. phenols and cresols
 - 26 per cent. fatty acids
 - Nil. Neutral tar oils
 - 6 per cent. alkalies
 - 20 per cent. water.

The sample is essentially carbolic acid dissolved in a solution of soaps.

- 6-1-04—Disinfecting fluid (“Quibel's”) contains—
 - 13 per cent. carbolic acid
 - 1·9 per cent. pyridine.

The remainder consists of neutral tar oils, caustic soda, water, and fatty acid.

Though the use of disinfectants is often justly discredited by the uncertainty of their composition, the compulsory statement of the percentage of chemicals, or active ingredients in disinfectants, germicides, &c., however, does not meet the case. Chemical analysis will not be found a reliable means of ascertaining the value of a disinfectant; the chemical analysis of disinfectants being of comparatively little importance, as, in ordinary practice, its germicidal value can only be tested bacteriologically. Indeed, the disclosure of the name or names of active ingredients on a label often mislead the public, long and scientific names conveying no notion of the germicidal value of a disinfectant. Again, there are many excellent and reliable disinfectants of a non-poisonous nature on the market whose germicidal efficiency has been proved by exhaustive experiments on vigorous cultures of plague or typhoid fever organisms. For instance, “Cyllin”—a preparation largely used at the present time by health and medical authorities throughout the world—contains no carbolic acid or its homologues, and yet it is a most efficient bactericide, its germicidal value being “thirty times that of carbolic acid (pure phenol) and over eighty times that of formalin.” Another preparation—a non-poisonous disinfectant “fluid”—contains less than 25 per cent. of carbolic acid, and yet is guaranteed by the manufacturers to be “ten times as powerful as carbolic acid of 100 per cent. purity.”

It will thus be seen that the percentage of carbolic contained bears no relation to the bacteriological efficiency of a disinfectant.

A great objection to many disinfectants is "that their variations in germicidal efficiency stand in no sort of relation to so much of their chemical composition, as can be estimated by usual methods, and that conformity with chemical specifications, such, for instance, as are often prescribed for disinfectants derived from tar, give no guarantee of any proportional bactericidal effect."

What is needed is that the absolute *germicidal* rather than the actual *chemical* value of every disinfectant should be guaranteed by the makers, and expressed on the label as its carbolic acid co-efficient, which is the system at present adopted in the British Army and Navy contracts for disinfectants.

This method avoids the necessity for the attempt under section 104 of "*The Health Act of 1900*" to express the disinfectant strength in terms of chemical constituents which give no trustworthy definition of it.

I have, &c.,

B. BURNETT HAM, M.D., D.P.H.,

Commissioner of Public Health.

APPENDIX A.

Department of Public Health,
Brisbane, 28th August, 1905.

SIR,—In submitting my report for the year ending 30th June, 1905, I have the honour to draw attention to the amount of useful work carried out under my supervision during the past twelve months, though, in consequence of the limited staff at my disposal, much necessary work still remains to be done.

METROPOLITAN AREA.

One thousand six hundred and seven visits of inspection have been made within the Metropolitan Area, independently of special house-to-house inspections, some of which were made in conjunction with the officers of the local authorities concerned. The sanitary condition of the whole area continues to improve, though the want of rubbish removal systems is very apparent by the amount of household garbage scattered about upon vacant allotments and other unoccupied land.

INSANITARY WATER-TABLES.

Numbers of the unformed water-tables, formerly receiving household drainage, have been laid with impervious material, thus removing nuisances of a very pronounced character.

SPECIAL INSPECTIONS.

Acting under your instructions, I accompanied Dr. Woolrabe, Health Officer, on an official inspection of all the hotels in the city of Brisbane. The premises of the licensed victuallers were generally found to be kept in good order. We also inspected the fish and oyster saloons and the cold storage accommodation in connection with this industry. One cold store was found to be in a filthy state. We also found that the oysters supplied to many of the clubs, hospitals, and hotels were opened and doused in water drawn from the Brisbane River, in close proximity to two large sewers. Bottled oysters were generally put up in the same liquid. The danger of typhoid spreading from this cause was at once apparent, and steps were taken to have this disgusting practice discontinued. Repeated surprise visits have been paid in connection with this nuisance, but, so far, I have not found it repeated.

Accompanied by the Commissioner of Public Health, Dr. Baxter-Tyrie, the Mayor and members of the Hamilton Town Council, an inspection of part of the Hamilton Area was made in order to arrive at a decision regarding a question of drainage which had for some time been a source of annoyance to the Council.

Inspections of a few of the camping grounds at seaside watering resorts have been made, and will receive further attention during the coming holiday season.

Consequently upon an outbreak of cerebro-spinal meningitis and acute anterior poliomyelitis in Brisbane and immediate vicinity, I made, by your instructions, a special inspection and inquiry into the sanitary circumstances of each case in an endeavour to elucidate the origin of the disease. It is worthy of remark that in almost every instance the patients lived in healthy surroundings, some in bracing country districts.

WYNNUM AND MANLY.

A special house-to-house inspection of Wynnum, South Wynnum, and Manly was also carried out. Every house and vacant allotment in these places were duly inspected. A considerable amount of rubbish was found scattered about, and accumulated in yards and vacant allotments. The premises occupied by one butcher were found to be in a filthy state. Orders have been issued to put these premises into a sanitary condition. A report of this inspection has already been submitted to you.

ENOGGERA AND ALDERLEY.

A desire having been expressed by residents in the districts of Enoggera and Alderley for the inauguration of a sanitary service, I, in accordance with your instructions, carried out a house-to-house inspection of these localities. The conditions revealed by that inspection warrant the institution of a proper system for the removal of nightsoil and garbage. A report on this matter has also been made.

WINDSOR.

A petition was lodged with the Commissioner of Public Health, signed by a large number of ratepayers and residents of the Swan Hill Area, requesting that he would endeavour to cause better drainage facilities to be provided for their district. In consequence of this petition, a thorough inspection and inquiry into the sanitary circumstances of the abovenamed district was carried out and reported upon. Plans have been prepared by the Council's engineer, and the work is to be proceeded with at an early date.

DRAINAGE.

Numbers of septic tanks, constructed on the most approved principles, have, from time to time, been fitted at suburban mansions with evidently satisfactory results. Where these tanks are fixed modern sanitary appliances are usually found. In some cases, instead of these tanks, deep, slab-lined, leaching cesspits are in use, which threaten to become a menace to health. In the desire for cheapness, these abominations can be fixed up unknown to local authorities. The contamination of underground water supplies by cesspits and soak-aways is beyond question. This method for the disposal of sewage ought not to be encouraged.

WATER SUPPLY.

Repeated complaints have been lodged with the Health Department regarding the water supplies at some of the State schools, parents alleging that their children have to carry drinking water in bottles to school in the summer time. At one school, water is laid on to small tanks, some of which latter are exposed to the sun's rays, thus tending to encourage the growth of algæ and their subsequent decay, which gives to water a characteristic fishy smell, rendering it unpalatable. This source of impurity is increased by the use of a charcoal filter, an arrangement which seldom receives attention.

Rain-water tanks should be provided at all schools dependent upon water drawn from the town mains and stored in tanks. Samples of water have also been procured from various rain-water tanks, and underground wells, and submitted to Mr. Pound, Government Bacteriologist, for examination and report. As a result of these reports, numbers of tanks have been emptied, thoroughly cleansed, and in some cases sprayed with formalin.

BUTCHERS' SHOPS AND BAKEHOUSES.

There are 109 butchers' shops and bakehouses within the Metropolitan Area, all of which have been inspected. The stabling accommodation at these premises, with but few exceptions, was found to be insanitary. Defective drainage and other defects were noted and the necessary action taken. A large number of butchers still persist in using brass or plated salting needles, which, in time, contaminate the meat with verdigris. We have endeavoured to get pure nickel needles substituted, and have been successful in many instances.

INTIMATION OF NUISANCE NOTICES.

The following list of statutory notices have been forwarded to various local authorities, calling their attention to nuisances within their respective areas requiring abatement. The local authorities and the number of notices forwarded are as follow:—

City of Brisbane	...	...	...	...	...	...	...	117
City of South Brisbane	...	...	...	...	...	...	...	157
City of Ipswich	...	...	...	...	...	...	...	42
City of Maryborough	...	...	...	...	...	...	...	332
Town of Hamilton	...	...	...	...	...	...	...	2
Town of Ithaca	...	...	...	...	...	...	...	13
Town of Windsor	...	...	...	...	...	...	...	3
Shire of Beenleigh	...	...	...	...	...	...	...	1
Shire of Brassall	...	...	...	...	...	...	...	1
Shire of Isis	...	...	...	...	...	...	...	39
Shire of Purga	...	...	...	...	...	...	...	4
Shire of Stephens	...	...	...	...	...	...	...	1
Shire of Southport	...	...	...	...	...	...	...	5
Shire of Strathpine	...	...	...	...	...	...	...	1
Shire of Toombul	...	...	...	...	...	...	...	1
Shire of Taringa	...	...	...	...	...	...	...	2
Shire of Wynnum	...	...	...	...	...	...	...	64
Total	...	...	...	...	...	...	...	780

COMPLAINTS.

Forty-nine complaints in writing have been received during the past twelve months and attended to. Numbers of these complaints have no foundation, others are greatly exaggerated, being frequently the result of neighbours' quarrels.

FOOD INSPECTION.

Numerous samples of foods and drugs have been procured and submitted to Mr. Henderson, Government Analyst, for report. The following is a list of the foodstuffs that have been seized during the past twelve months and condemned as unfit for the food of man, and comprise:—

						Tons	cwt.	qr.	lb.
213 crates of bananas ...	...	...	...	...	...	106	10	0	0
11 boxes of butter ...	...	...	...	...	...	0	5	2	0
75 half-barrels of salt herrings	...	...	...	...	...	3	16	0	0
135 cases of oranges ...	...	...	...	...	...	3	1	0	18
18 tins of jam ...	...	...	...	...	...	0	0	1	8
						113	12	3	26

BUBONIC PLAGUE.

A recrudescence of plague occurred in South Brisbane on 12th August, and assumed serious proportions. An emergency was declared by the Commissioner of Public Health, and a systematic cleansing of South Brisbane was commenced, which considerably increased the inspectorial work. The departmental rat gang was augmented by thirty extra men, and a crusade of rat destruction and cleansing was begun on the 22nd of the month, and continued with unabated vigour up to the 17th September, when the gang was disbanded.

Prior to this outbreak, a suspicious case of fatal illness occurred at a flock factory in Hawthorne street. Another case, which turned out to be plague, occurred at the same place the following week. This, and the fact that rags were gathered from all sources to be converted into flock for upholstery purposes, and also that large numbers of infected rats had recently been found in a produce store in the immediate vicinity, justified drastic measures. The flock mill was accordingly condemned and burnt with the contents. Nine hundred and ninety-two loads of rubbish were either burned or removed during the cleansing operations in South Brisbane, rat-destruction being subsequently continued by the departmental gang. In one block of buildings the cellarage was below the level of the pavement, and rats found harbourage there behind the old rotten slab linings, and could not be properly exterminated. This was important, in view of the fact that infected rats had been found there ever since plague had been introduced into the State.

In consequence of the rats burrowing into the buildings from the main sewer, the Commissioner of Public Health ordered the construction of a brick wall, which was accordingly carried out. Since then no infected rats have been found in this locality, nor complaints made regarding their presence. The action taken is thus justified, and its value amply proved by experience of similar works carried out in various parts of Brisbane.

The plague was not confined to the city, but extended some considerable distance into the country. One case occurred at a farm several miles out of town. Prompt measures were taken and every precaution adopted to prevent its spread.

Thirty-four cases have occurred in Brisbane and surroundings during the financial year. The premises where the patients resided were thoroughly cleansed and fumigated, and their places of occupation also cleansed and disinfected.

ITHACA.

Several cases occurred within the town of Ithaca. With the co-operation of the Council, a systematic inspection and cleansing of the town was carried out, and a crusade of rat extermination vigorously prosecuted for some considerable time. The vacant allotments seem to be looked upon by householders as a fit and proper place upon which to deposit all kinds of garbage, and they will continue to do so until a contract is made for the regular periodical removal of rubbish from all dwellings.

RAT EXTERMINATION.

The departmental rat gang continued its operations throughout the year, and has accomplished good work. In the month of February the gang was again increased by thirty men, and the city infected area of 1902, as well as produce stores and other business premises, systematically hunted for rats from house to house. This effort was kept up until the 28th March, when the gang was again reduced in numbers.

DEFECTIVE DRAINS.

In the course of their operations a large number of defective drains were found, and unused connections to the main sewers laid bare, which afforded easy egress and ingress for the rats. These defects were so numerous that the Commissioner of Public Health deemed it advisable to make a special inspection, accompanied by Mr. Kemp, late City Engineer, and members of the Town Council, for the purpose of showing them the dilapidated state of the drains in question.

Four hundred and eleven complaints have been attended to by the gang for the half-year ending 31st December, 1904, and 762 for the half-year ending 30th June, 1905, making a total of 1,193 complaints received regarding rats upon premises, all of which received prompt attention. This is in addition to the ordinary routine duties of the gang.

At the request of the Comptroller-General of Prisons, a small gang was sent to St. Helena for two weeks in December, for the purpose of exterminating the rats which had become very troublesome. Seven hundred and fifty-five rats were obtained as a result of their labours. Besides their other duties the members of the rat gang have constructed experimental rat pits at Cohnslic Hospital for scientific purposes.

The total number of rats and mice destroyed within the Metropolitan Area is as follows:—

	Rats.	Mice.
Brisbane	17,458	4,870
South Brisbane	3,053	580
Other local authorities	6,808	420
Rivers, ships, and wharves	1,484	212
	<hr/>	<hr/>
	28,803	6,086

Total, 34,889.

For reasons of economy, the rat gang were reduced to ten men on the 3rd June, 1905.

SANITARY DISINFECTION AND INFECTIOUS DISEASES.

Five hundred and forty-nine cases of infectious diseases have been reported to the Department during the fiscal year. The premises where they occurred were inspected, and fourteen statutory notices sent to local authorities regarding sanitary defects. At one house, where a case of typhoid fever occurred, during examination into the probable cause of the outbreak, a dead cat, in an advanced stage of decomposition, was found in the rain-water tank, the only supply.

Seven hundred and sixteen premises were disinfected. The number of premises disinfected in excess of the number of cases notified is accounted for by the reason that a large number of dengue fever cases were reported as suspected typhoid, and a number of phthisis cases disinfected on more than one occasion. The majority of the plague cases are here accounted for.

Three hundred and six pounds of rat poison and 800 gallons of carbolic disinfectant were manufactured, under the supervision of Inspector Daniel, of this Department, who is a qualified chemist. Two hundred and twenty-two gallons were supplied to other Government Departments, leaving 578 gallons used by the Department in combating plague in Brisbane, Bundaberg, Cairns, Childers, Gladstone, Ipswich, Townsville, and Maryborough.

A serious outbreak of typhoid fever occurred at a fashionable suburban boarding-house. A number of the cases proved fatal. The drainage was found to be in a very defective condition. Samples of water were taken from the rain-water tanks; these, along with the household filters, were submitted to Mr. Pound, Government Bacteriologist, for examination and report. One filter was found to be in a contaminated condition. The rain-water tanks were emptied and cleansed, and the drainage system has been renewed.

SHIPPING REGULATIONS.

The shipping regulations were suspended on the 30th September, 1904, and enforced again in the beginning of January. Three hundred and eighty-six vessels have been furnished with berthing certificates, and eighty-six vessels fumigated in the course of the year. In the latter part of the year it came to the knowledge of the Commissioner of Public Health that the vessels trading between Brisbane and the Northern Rivers of New South Wales had to comply with the shipping regulations, while the New South Wales vessels trading with infected ports were allowed alongside of the different wharves without restriction. An officer of the Health Department was despatched to the Northern Rivers, whose report on the matter fully substantiated this differential treatment by the New South Wales officials. Action has since been taken to have these restrictions modified.

BABY-FARMING.

There are sixty-nine persons within the Metropolitan Area who take children for hire. I made an endeavour to inspect the premises of these baby-farmers, but was reluctantly compelled to forego this useful work owing to pressure of duty in other directions. The conditions under which some of these children are kept are good, others very bad.

OTHER PARTS OF THE STATE.

Towards the end of the last financial year an outbreak of plague took place in the town of Ipswich. Steps were immediately taken to prevent its spread, and a thorough cleansing and house-to-house inspection initiated. Some 200 loads of rubbish were collected and disposed of, besides a large number of rats destroyed; twenty-two were found to be plague-infected.

A fresh outbreak took place in the month of May of this year, and was traced to a produce store, where infected rats had been found from time to time. This store was in a filthy state, and quite unfit for the purposes for which it was used. By the orders of the Commissioner of Public Health it was razed to the ground and other precautions adopted to stamp out the disease. During the operations five infected rats were found in the immediate vicinity.

BINGERA.

In the early part of the year a severe outbreak of enteric fever occurred on the Bingera Sugar Plantation. At the request of Mr. Angus Gibson, the Commissioner of Public Health took measures to combat the disease, and to prevent its recurrence. This has already been the subject of a special report.

GOODNA.

Accompanied by Dr. Woolrabe, I made an inspection of the abovenamed township, and, at the request of the Purga Shire Council, selected a sanitary depôt for the proposed sanitary contract that the Council contemplate. The existing sanitary service was in the hands of a private individual, who buried the nightsoil on a small piece of land within the town.

CHILDERS.

An outbreak of plague having taken place in Childers in the month of May, I accompanied Dr. Baxter-Tyrie to assist in any measures that might be found necessary. The town was overrun with rats, and required a thorough cleansing. A ganger, experienced in the work of rat destruction and cleansing, was sent from Brisbane to take charge of the men employed by the Municipal Council to clean up the town. One hundred and forty-three five-horse dray loads, each equivalent to three ordinary loads, of rubbish were removed, and 190 loads destroyed by fire. Large numbers of rats were caught, some of which were plague-infected. The sanitary contract having expired, and a new depôt required, I selected a suitable site for this purpose. The Childers plague outbreak has already been fully reported on.

HOWARD.

At the request of the Howard Shire Council, the services of a man experienced in the work of rat destruction was asked for at the time of the Childers plague outbreak, to assist in exterminating the rats within the town. This request was complied with. The local authority is making arrangements for a sanitary contract. By your directions, I have selected a sanitary paddock for the Council in order to have everything in readiness for the commencement of the work.

BUNDABERG.

The temporary plague hospital erected at Bundaberg in 1900 was rendered almost useless by the ravages of white ants. In order to be prepared for any emergency that might arise, it was necessary to have these buildings placed in a habitable condition, and at your request a sum of money was placed by the Department of Public Works at our disposal for the work of repair. The necessary specifications were prepared by Inspector Munro of this Department, a competent architect, who also supervised the work while making a sanitary inspection of the town. The alterations and repairs effected will render the buildings serviceable for years to come.

MARYBOROUGH.

In the month of June an outbreak of plague occurred in Maryborough, and assumed a serious aspect. The gravity of the situation was such that special measures were taken to deal promptly with the occurrence. The municipality covers a large area, and much necessary work requiring to be done, a gang of experienced men were sent from Brisbane to assist the men put on by the Town Council in order to expedite the work as much as possible. Over 2,000 visits of inspection were made within the municipality. All yards and vacant allotments thoroughly cleansed where necessary. Plague premises were fumigated, and the General Hospital similarly dealt with prior to raising the quarantine under which the buildings had been placed.

I have, &c.,

JOHN SIMPSON, Memb. Royal San. Inst., Gt. Brit., Chief Inspector.

The Commissioner of Public Health.

APPENDIX B.

REPORT OF THE GOVERNMENT ANALYST.

Government Chemical Laboratory,
Brisbane, 2nd August, 1905.

SIR,—I have the honour to submit herewith a report of the work done in connection with the Health Act in the Government Chemical Laboratory during the year 1904.

Two hundred and seventy-four samples were received directly from your Department. No fees were received for any analyses under the Health Act, as no samples were submitted to me as referee under the Act.

The results of analyses of the various samples have already been reported to you in detail. One hundred and forty-seven samples of cream of tartar were received, nearly all being from the Customs, from shipments on importation. One hundred and nineteen samples contained 95 per cent. of hydrogen potassium tartrate, or over. Of the remainder, twelve were over 94 per cent., eight over 93 per cent., two over 92 per cent., and one contained 87 per cent. hydrogen potassium tartrate. One, made up locally, contained only 45 per cent. hydrogen potassium tartrate, while four samples sent in as "cream of tartar substitute" were found to be superphosphate of lime.

The samples tabulated below were received from your officers with a view to determining their fitness for human consumption, but were not taken strictly according to the Act with a view to prosecution. However, I include them in my report.

Several samples of liquor were taken in accordance with the Health Act. A sample of schnapps from a hotel in South Brisbane was found to be adulterated with 280 grains of sulphuric acid per gallon.

A sample of rum from the same hotel contained 15 per cent. of added water, and nicotine was also found present. The defendant pleaded guilty, and was fined £30 9s. 6d., including costs. Three samples of liquor from another hotel were found to contain nicotine.

No. 1 Rum, 44.6	under proof = 25.2 per cent.—	Nicotine present
No. 2 Liquor, 30.84	„ = 8.0 „	Nicotine present
No. 3 Liquor, 56.06	„ = 41.0 „	Nicotine present
No. 4 Liquor, 35.13	„ = 13.5 „	No nicotine
No. 5 Liquor, 30.84	„ = 8.0 „	Nicotine present.

The defendant was found guilty, and fined £10 and £5 9s. 6d. costs in one case, taken under the Health Act, and in connection with another sample, under the Criminal Code, fined £200, and all the adulterated liquor was destroyed—about 150 gallons.

SAMPLES FROM OFFICERS OF HEALTH DEPARTMENT.

Oils.—Twenty samples of “salad” oil were received. Four were genuine olive oil, eight were cotton-seed oil, six arachis oil, one a mixture of poppy and sesame oils, and one a mixture of arachis and sesame oils. One sample, marked Lucca oil, was entirely cotton-seed oil. Three samples, marked respectively olive oil, castor oil, and eucalyptus oil, were found to be genuine.

Milk.—Two samples of milk were examined, and each contained about 15 per cent. added water. Three samples of condensed milk were found to be of good quality.

Tea.—Three samples submitted from the Customs, as “suspected,” were found to be adulterated with lie tea.

Oatmeal.—One sample of oatmeal was found to contain 1.57 per cent. As_2O_3 . This oatmeal had caused poisoning, but no satisfactory explanation was obtained as to how the arsenic got into the meal.

Vinegar.—Four samples of vinegar were found to be acetic acid diluted with water. The samples contained 2.9, 3.4, 4.0, and 2.9 per cent. acetic acid.

Pickles.—Four samples of pickles were found fit for human consumption.

Liquors.—One sample each of brandy, whisky, lager beer, and ginger wine were fit for consumption, but one sample of schnapps had been adulterated with 25 per cent. added water.

Cordials.—One sample of raspberry cordial was genuine, but other—two raspberry and one strawberry—cordials were solutions of sugar flavoured with essences, and coloured with coal tar dyes.

Jam.—Three samples were found genuine, one sample of quince jam had one grain of salicylic acid per lb.

Confectionery.—Four samples of coloured sweets were coloured with coal tar dyes, while one sample of “milk kisses,” supposed to contain paraffin, was found to be free from non-edible fat.

Cochineal.—One sample of cochineal was genuine.

Essences.—Three samples of essence of lemon were genuine, though two were very dilute. Two samples marked essence of lemon were fictitious. Two samples of essence of vanilla were genuine, one was fictitious.

Sauce.—Three samples of sauce were free from preservative, one had 0.2 grains of salicylic acid per lb., while a tomato sauce was not genuine, and had 2.0 grains of salicylic acid per lb.

Baking Powder.—Three samples of baking powder were found to be good.

Curry Powder.—One sample was found free from coal tar dyes.

Custard Powder.—One sample of custard powder was maize starch, coloured with a coal tar dye, and had a little artificial flavouring added.

Cornflour.—One sample was genuine.

Cocoa.—One sample was genuine.

Pepper.—Two samples were mixtures of pepper and starch.

Mustard.—One sample was a mixture of starch and mustard, while another contained starch, pepper, and mustard, and was coloured with turmeric.

Tinned Fish.—Three samples of sardine were found to be genuine, and free from preservative and mineral oil. Four samples of bloater paste were analysed. One was free from starch and preservatives, two contained starch but no preservative, and one contained starch and boric acid. One sample of anchovy paste was fish paste and starch, free from preservatives. One sample of tinned salmon was good, and free from preservative and artificial colouring matter. One sample of salmon and shrimp paste contained fish paste, starch, and boric acid.

Tinned Meat.—One sample of luncheon beef was good. A sample of “turkey and ham” was meat paste, with starch, boric acid, and alum. Two samples of ham and tongue contained starch and boric acid, in addition to the meat paste. Two samples of devilled ham contained no starch or preservatives.

I have, &c.,

J. BROWNLIE HENDERSON,

Government Analyst.

To the Commissioner of Public Health, Brisbane.

APPENDIX C.

REPORT OF DR. BAXTER-TYRIE—PREVENTION OF CONSUMPTION.

Department of Public Health,
Brisbane, 18th August, 1905.

SIR,—I have the honour to submit the following progress report on the administration of the regulations issued for the prevention of tuberculosis in October last year.

Reports have been prepared and submitted to you covering the work done by the staff nurse and disinfecting officer. The information that has been acquired, *pari passu*, with the progress of the work emphasises the great and urgent need that existed for the institution of these regulations. Case after case supported the conclusion that many lives have been sacrificed for want of a little knowledge of the dangers of intimate association with a tubercular patient when no precautions to avoid infection are taken. The knowledge which the patients acquire as to their own condition is of the greatest possible benefit.

It is a matter of common knowledge, founded on the results of *post mortem* examinations, that at least 95 per cent. of the population have at some period of their life suffered from tuberculosis; also that, unlike most infectious diseases where one attack protects the individual, tuberculosis, if it once attacks a person, renders him more susceptible to another attack.

Many consumptives fall victims to their own sputum through ignorance of the danger they run in continually inhabiting the same premises. The instruction which acquaints him with the grave danger he is courting will, in not a few cases, save his life. It is gratifying to note the thorough earnestness displayed by patients and relations alike in following the instructions of the nurse and disinfecting officer.

It will thus be seen that the work is not limited to the prevention of the spread of the disease, but that, in addition, valuable help is being extended to those already in the grasp of the malady.

The undertaking is a work which will require years before it can be appraised at its true value. But it must be evident, however, that the good is immediate, although it may be decades before the slight but significant decrease in the Registrar-General's annual return of the deaths due to consumption proclaims that material progress has been made in combating the "white man's scourge."

The advance which has been made in instituting these measures for the prevention of man to man infection with tuberculosis is a matter for congratulation, and we are in advance of most other countries in taking action.

TRANSMISSION OF TUBERCULOSIS BY COWS' MILK.

There is another source of infection, however, which demands urgent attention. Next to the lungs, the alimentary tract is the most important channel of infection. This infection is generally conveyed in the milk from tubercular cows. It is chiefly infants and young children that are affected. This source of infection is of great importance in a country such as this, where a large proportion of the infants are bottle-fed. Proof of the possibility of experimentally infecting animals by milk from tuberculous cows was furnished by Gerlach long before the discovery of the tubercle bacillus by Koch. Each succeeding investigator has confirmed his observation that "intestinal infection in children is common, and tubercular ulceration of the intestine and tubercle of the glands connected with the intestinal tract are of frequent occurrence in infants." *No infant is born tubercular.*

In 127 cases of tuberculosis examined by Woodhead, intestinal ulceration was found in 43; in 100 cases, or nearly 79 per cent. of the whole, the intestinal glands were in some stage or other of tubercular degeneration. "It would thus appear that intestinal tuberculosis is very common in children." The age at which these tubercular glands were found is very significant.

1st year—	4 cases.
1 to 2½—	33 „
3 to 5½—	29 „
6 to 7½—	12 „
8 to 10—	13 „
11 to 15—	9 „

It is, therefore, patent that no scheme for the prevention of human tuberculosis can be complete that does not take cognisance of the risks that children run of infection by milk from tubercular cows. Fortunately, in tuberculin we have a most reliable test to determine whether a cow is tubercular or not.

No dairyman should be allowed to supply milk for consumption from cows which have not been tested by tuberculin. In Denmark, and in several other European countries and many towns in Great Britain, a periodic examination of dairy cattle is compulsory, and anyone evading the regulation is subject to a severe penalty.

In order to ascertain what measures were taken in and around Brisbane to safeguard the children by testing dairy cattle by tuberculin, the following inquiries were forwarded to the Agricultural Department:—

- (1.) The number of cows in the Metropolitan Area that are used for the supply of milk?
- (2.) The number of cows tested for tuberculosis by tuberculin?
- (3.) The number of cows condemned for tuberculosis?

The following reply was received:—

- “(1.) In December, 1904, there were 3,769 cows in milk, exclusive of dry cows, in the Metropolitan Area.
- “(2.) The tuberculin test was not generally applied to cows because the owner's consent had first to be obtained. In 1900 and 1901, fifty-nine (59) cows were submitted to the test.
- “(3.) Since 1900, fourteen (14) tubercular cows have been condemned; two (2) have been condemned for tubercular mammitis, and fifty-nine (59) for diseased lymphatic glands. Some of these were undoubtedly tubercular, but definite information is not obtainable.”

It will thus be seen that practically no precautions are taken, inasmuch as routine testing by tuberculin is evidently not practised, and that cattle are only condemned as tubercular when gross lesions of the udder or other parts manifest themselves.

The appalling mortality of infants is now receiving attention in Parliament. It is certain that many lives would be saved if it were made compulsory that every cow supplying milk be regularly tested with tuberculin, and that dairy cattle be frequently and rigidly inspected for tuberculosis.

I have no desire to assume the rôle of censor, but I emphatically say that the present system is incomplete, unscientific, inefficient, and inadequate. The above reply by the Agricultural Department is a lamentable exposure of the measures, or want of measures, existing for protecting children from tuberculosis by looking after the milk, and, at the same time, is an urgent plea for the immediate institution of the measures I am advocating.

When we compare the record of what has been done in Queensland during past years to protect children from tubercular infection with the appended system of inspection employed in Denmark, is it any wonder that our infant mortality in Brisbane is so high as to become an urgent question?

I have, &c.,

C. C. BAXTER-TYRIE,

Health Officer.

ADDENDUM.

Prior to the passing of “*The Dairy Produce Act of 1904*,” I believe there was no provision for compelling owners of dairy cattle to submit their animals to the tuberculin test. Under the Dairy Act, if section 26, subsection 6, were put in force, periodic testing could be made compulsory. Therefore, it is only necessary to enforce the existing regulation to ensure the protection of children from infection by milk from tubercular cattle.

C. C. B.-T.

The Commissioner of Public Health, Brisbane.

APPENDIX D.

NOTIFICATION OF PHTHISIS—REPORT OF STAFF NURSE PERRY.

Department of Public Health,
Brisbane, 25th July, 1905.

SIR,—I have the honour to submit the following report of my work as nurse in connection with the rules instituted for the prevention of human tuberculosis on 19th October, 1904. I commenced duty in November, and have visited since that date every case of tuberculosis notified to the Department, except a few cases where the practitioner in attendance preferred to personally undertake the charge of supervision. The patients have been mainly of the working class, and in the majority of cases the condition of the premises, the mode of living, and the utter absence of preventive measures indicated the urgent necessity of explaining to the patients and those in contact the danger to which they were constantly exposing themselves. Nothing was more noticeable than the immediate improvement in the surroundings of the patient after a visit or two had been paid, as evidenced by the efforts made to carry out the rules issued in the leaflets, and any suggestions which the special exigencies of the case might indicate. In several instances three or four of the family were occupying the same bedroom, but after instructions being given this was rectified. In one case in particular, the patient occupied the room used by the household as a dining-room as his sleeping apartment for six months. As soon as this case was notified, I visited the house, and ascertained that the case died that day, and his brother had gone to the Dalby Sanatorium. The premises were thoroughly disinfected. It is only by constant supervision of the patients that I am able to ascertain when they remove from one residence to another, and, by informing the disinfecting officer, he sees that the room or house vacated is disinfected before being used by any other individual. One has to combat much carelessness in patients failing to notify their removal from one place to another. The patients are extremely grateful for the interest displayed in their welfare, welcome my visits, and are most anxious to carry out all instructions and any suggestions which I may

make, and quite realise the benefit they derive from them. There is only one instance where I have been refused admission; the patient in this case thought she had a grievance because she had been refused admission to the Dalby Sanatorium. In many of the cases hereditary history was traced. In all cases specimens have been submitted to the Government Bacteriologist, and the result has been, in a great majority of the cases, that tubercle bacilli have been found. The patients in their homes use a receptacle containing some disinfectant, and those who are strong enough to go out of doors carry a flask, or use a paper bag, or a piece of rag, which is burnt after their return home. If they should use a handkerchief, this is placed in boiling water or a solution of disinfectant before becoming dry. These patients are made to realise the danger of expectoration in the streets. Some of the patients who have not got well-ventilated rooms live on the veranda for the major portion of their time. Attendants to patients are instructed always to be careful to wash their hands after attending to patients, never to take food out of the same vessel, and to destroy, by burning, food which has been left; also, boil all cups, plates, spoons, &c., used by the patient; to avoid raising dust in bedrooms, and to assist the patient in carrying out instructions as far as possible.

Shortly after the inception of this scheme, it was seen that some more efficient means would have to be adopted in connection with the hospitals. The medical superintendents were consulted and a system of card (example approved) of notifications adopted. This has, with the active co-operation of the hospital authorities, proved most satisfactory. Much of the success achieved in carrying out the work is due to the courtesy of the medical practitioners, who have, without exception, done their utmost to further my work.

From November, 1904, to June, 1905, ninety cases were reported, 160 visits have been paid, and rules distributed in every case. Three patients have been sent to Dunwich, seventeen to the Dalby Sanatorium, and twenty-two deaths have occurred.

I have, &c.,

AMY PERRY,
Staff Nurse.

To the Commissioner of Public Health.

APPENDIX E.

REPORT OF DISINFECTING OFFICER.

Department of Public Health,
Brisbane, 26th July, 1905.

SIR,—I have the honour to report that since 14th November, 1904, ninety cases of phthisis have been reported to this office, twenty-two of which have proved fatal.

Of the cases reported, I have inspected the premises of sixty-nine, was unable to find six, and fifteen were reported after death.

The premises, with one or two exceptions, were found to be in a satisfactory condition, and where any defective drainage or dirty or insanitary conditions were found, the Local Authority concerned was notified, and steps taken to have the premises put in a more sanitary condition.

The work entailed the disinfection of fifty-two premises, which was carried out under my supervision or instructions. The majority of the premises were disinfected by spraying the infected room or rooms and contents with a 10 per cent. solution of formaldehyde, and afterwards vapourising formaldehyde tabloids—2 oz. of tabloids to every 1,000 cubic feet of space; the room being closed up for twelve hours. Anything that could not be disinfected was destroyed by fire. In one instance, the whole contents of the room were removed to Wattlebrae Hospital, and disinfected in the "Reck Disinfector," the cost being paid by the relatives of the patient.

Another case was that of a kanaka, who was found dead at his residence in South Brisbane. The police reported the case to the office after the *post mortem* examination. These premises were found in a filthy condition, owing to the patient living alone and being in a very weak state of health. The premises had been used as a kanaka boarding-house, and there was a large quantity of dirty, old beds and bedding of every description, the whole of which was destroyed by fire.

I have, &c.,

FRANK DANIEL, Inspector.

The Commissioner of Public Health, Brisbane.

APPENDIX F.

TABULAR STATEMENT CONCERNING AN OUTBREAK OF INFANTILE PARALYSIS AND CEREBRO-SPINAL MENINGITIS
IN STATE OF QUEENSLAND, 1904-5.

ANTERIOR POLIOMYELITIS.

SEX INCIDENCE.

	Cases.	Case Incidence.
Males	43	39·815 per cent.
Females... ..	36	33·334 „
Not stated	29	26·851 „
Total	108	

AGE INCIDENCE AND MORTALITY.

Age.	Cases.	Deaths.	Case Incidence.	Age Mortality.
1 year	8	...	7·407 per cent.	...
2 „	29	...	26·851 „	...
3 „	28	...	25·925 „	...
4 „	10	3	9·260 „	30 per cent.
5 „	7	...	6·482 „	...
6 „	8	...	7·407 „	...
7 „	4	...	3·704 „	...
8 „	2	...	1·852 „	...
9 „	1	1	0·926 „	100 per cent.
11 „	3	...	2·778 „	...
13 „	3	...	2·778 „	...
14 „	4	...	3·704 „	...
20 „	1	...	0·926 „	...

CEREBRO-SPINAL MENINGITIS.

SEX INCIDENCE AND MORTALITY.

	Cases.	Deaths.	Sex Mortality.
Males	8	1	12·50 per cent.
Females	8	2	25·00 „
Not stated	7	2	28·57 „
Total	23	5	21·739 per cent.

AGE INCIDENCE AND MORTALITY.

Age.	Cases.	Deaths.	Case Incidence.	Age Mortality.
1 year	2	1	8·695 per cent.	50 per cent.
2 „	2	...	8·695 „	...
3 „	5	1	21·739 „	20 per cent.
4 „	5	1	21·739 „	20 „
5 „	2	2	8·696 „	100 „
7 „	1	...	4·348 „	...
10 „	1	...	4·348 „	...
11 „	1	...	4·348 „	...
12 „	1	...	4·348 „	...
14 „	1	...	4·348 „	...
25 „	1	...	4·348 „	...
Not stated	1	...	4·348 „	...

APPENDIX G.

RETURN SHOWING PARTICULARS OF ALL SPECIMENS EXAMINED AT THE BACTERIOLOGICAL INSTITUTE
DURING THE YEAR 1904.

Disease.	Nature of Specimen.	NUMBER.		TOTALS.	
		Positive.	Negative.	Positive.	Negative.
Tuberculosis	Sputum, human	102	197	107	217
	Urine " ... ..	...	4 ..	
	Pus "	2	1		
	Tissue from groin (human) ... ..	...	1	
	Pleuro virus from cattle	1	9		
	Cows' milk ... ..	...	3	
	Viscera, lungs, and meat (animal)	2	2		
Typhoid fever	Blood	229	369	229	369
Plague	Lymph, &c., human	31	21	442	25,278
	Viscera " (P.M. material)	5	2		
	Pus "	2	3		
	Sputum " ... ..	...	1	
	Blood " ... ..	...	2	
	Rats	401	20,330		
	Mice	3	4,919		
Diphtheria	Throat swabbing	100	104	101	104
	Rhinitis swabbing	1	...		
Gonorrhœa	Urethral discharge	2	13	2	16
	Swabbing (vagina) ... ..	...	1	
	Urine ... ..	...	2	
Actinomycosis	Discharge (human)	1	1	1
	Tumour (animal)	1	...		
Leprosy	Lymph, &c.	34	18
Septicæmia	Blood	1	...
Tetanus	Exudate	1
Malaria	Blood	1
Influenza	Sputum	1	...
Hydatids	1	...
Sarcoma	Blood from Liver	1
Filaria	Blood	1	...
Pyæmia	Pus for Strepto.	1	...
Cerebro-spinal Meningitis	Nasal Swabbing	3	...
Ptomaines	Fish	1
Pathological tissues	Human	96	...	103	...
	Animal	7	...		
Tick fever	Blood from cattle	16	3
	Ticks (Ixodes bovis)	1	...
Duck cholera	Viscera from ducks	1	...
Animal parasites	Ham for Cysticercus cellulosæ	1	...
Miscellaneous	Water examinations	47	...	71	4
	Milk analyses	3	...		
	Ice cream for bacteria	2	...		
	Beer "	2	...		
	Brine "	4	...		
	Nightsoil "	1	...		
	Calf's brain "	1	...		
	Urine for pus, casts, bilharzia, &c., &c.	9	...		
	Cultures for staphylococci	4	...		
	Cerebro-spinal fluid for staphylococci	1	...		
	Abdominal pus for colon bacilli	1	...		
Total number of Specimens examined	1,117	26,014
Grand Total	27,131	

APPENDIX H.

TABLE SHOWING AMOUNT OF COLLECTIONS AT THE BACTERIOLOGICAL INSTITUTE FROM DIFFERENT SOURCES DURING 1904.

							Specimens Examined.	Pleuro Virus.	Tuberculin.	Pipettes.
							£ s. d.	£ s. d.	£ s. d.	£ s. d.
January	...	...	...	...	...	...	5 10 0	1 1 6		
February	...	...	...	...	...	...	3 15 0	5 7 0	...	0 1 3
March	...	...	...	...	...	...	8 0 0	5 18 5	0 3 6	2 0 0
April	...	...	...	...	...	...	3 15 0	3 4 0	0 1 0	
May	...	...	...	...	...	...	5 15 0	0 12 0		
June	...	...	...	...	...	...	0 15 0	0 10 0		
July	...	...	...	...	...	...	5 0 0	0 8 6		
August	...	...	...	...	...	...	2 0 0	4 6 1		
September	...	...	...	...	...	...	2 10 0	5 4 6		
October	...	...	...	...	...	...	2 5 0	1 8 0		
November	...	...	...	...	...	...	1 5 0	3 13 0		
December	...	...	...	...	...	...	2 15 0	0 10 0		
Totals							43 5 0	32 3 0	0 4 6	2 1 3
Grand Total							£77 13 9		...	...

Price 9d.]

By Authority : GEORGE ARTHUR VAUGHAN, Government Printer, William street, Brisbane.

[illegible]